

WP 05-WH1402

Revision 23

13-Ton Electric Forklifts

Technical Procedure

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APPROVED FOR USE

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TABLE OF CONTENTS

CHANGE HISTORY SUMMARY 3

1.0 INTRODUCTION 4

2.0 REFERENCES 4

3.0 PRECAUTIONS AND LIMITATIONS..... 5

4.0 PREREQUISITE ACTIONS 6

5.0 PERFORMANCE..... 7

 5.1 PREOPERATIONAL CHECKS 7

 5.2 BATTERY CHARGING 9

(\$) Attachment 1 – 13-Ton Electric Forklifts Preoperational Checks [HWFP Table E-1]10

Attachment 2 – Leak Categorization 13

CHANGE HISTORY SUMMARY

REVISION NUMBER	DATE ISSUED	DESCRIPTION OF CHANGES
22	07/31/18	DSA Rev. 6A: <ul style="list-style-type: none">• Updated LCO 3.2.5 in Precautions and Limitations.• Removed Filtration from Battery Exhaust Filtration System.
23	11/14/19	Minor revision. <ul style="list-style-type: none">• Updated JHA number and title.• Added Precaution, bullet 8, and Limitation, bullet 3.

1.0 INTRODUCTION

This procedure provides instructions for preoperational checks of the 13-Ton Electric Forklifts at the Waste Isolation Pilot Plant (WIPP). This procedure meets inspection criteria of the Hazardous Waste Facility Permit (HWFP).

Performance of this procedure, or selected sections of the procedure, implements inspection requirements of the Hazardous Waste Facility Permit (HWFP) relative to the scope of, and as defined in, this document.

Records generated are handled per departmental Records Inventory and Disposition Schedules. Performance of this procedure generates the following record.

- Equipment Logbook

2.0 REFERENCES

DOCUMENT NUMBER AND TITLE	BASELINE DOCUMENT	REFERENCED DOCUMENT	KEY STEP
40 CFR 264.15, General Inspection Requirements	✓		
DOE Standard, 1090-2011, Hoisting & Rigging	✓		
Hazardous Waste Facility Permit, EPA Identification Number NM4890139088-TSDF	✓		(\$)
41-H-012, Auto Lift Operators Manual	✓		
41-H-012C, Hoist Lift Truck Operators Manual	✓		
41-H-012D, 41-H-012E, 41-H-012F Hoist Lift Truck Operators Manual	✓		
DOE/WIPP-02-3183, CH Packaging Program Guidance	✓		
DOE/WIPP-02-3184, CH Packaging Operations Manual	✓		
DOE/WIPP-02-3185, CH Packaging Maintenance Manual	✓		
DOE/WIPP-07-3372, Waste Isolation Pilot Plant Documented Safety Analysis	✓		
DOE/WIPP-07-3373, Waste Isolation Pilot Plant Technical Safety Requirements	✓		(\$)
WP 04-AD3001, Facility Mode Compliance		✓	
WP 04-AD3011, Equipment Lockout/Tagout	✓		
WP 04-AD3016, Equipment Out of Service Process		✓	

DOCUMENT NUMBER AND TITLE	BASELINE DOCUMENT	REFERENCED DOCUMENT	KEY STEP
WP 05-WH1101, CH Surface Transuranic Mixed Waste Handling Area Inspections	✓		
WP 13-1, Nuclear Waste Partnership LLC Quality Assurance Program Description	✓		
WP 15-GM1002, Issues Management Processing of WIPP Forms		✓	
05-WH1402-JHA, General Forklift Operations	✓		

3.0 PRECAUTIONS AND LIMITATIONS

3.1 PRECAUTIONS

- Eye, foot, head, hand hazards exist during loading empty super sack racks onto trailer or when connecting and/or disconnecting battery nip/power plugs. Safety shoes are required during forklift operation.
- Forklift use hazards exist during forklift operations. A spotter will be used while handling waste outside a closed CH package and/or during equipment operations in which the operator's vision is obstructed.
- Moving/falling objects hazard exists during forklift operations. All personnel will stand clear of moving equipment and/or material/loads.
- Pinch point hazards exist. Leather gloves or equivalent will be worn when pinch point hazards are present.
- Radiological hazard exists when moving waste in the CH Bay. Work will be performed in accordance with approved Radiological Work Permit (RWP).
- Slip/trip hazards exists during general operations. Housekeeping shall be maintained.
- Vehicle traffic/heavy equipment hazards exists during general operations. Operator will ensure travel surface is suitable.
- Lack of ventilation hazards exist when charging batteries. Personnel are to verify ventilation is operable.

3.2 LIMITATIONS

- The Technical Safety Requirements (TSRs) contain Limiting Conditions of Operation (LCOs) and Special Administrative Controls (SACs) which provide specific preventive or mitigative limits and required actions for identified accident scenarios. Failure to comply with LCOs or SACs may constitute a violation and must be immediately reported to the Central Monitoring Room Operator (CMRO). The step affected by the LCO/SAC is denoted with the **TSR** designator in the margin, a **(\$)** at the beginning of the step and is followed by the LCO or SAC number in bold brackets (e.g., **[LCO 3.X.X]**). Applicable LCO and SAC Surveillance Data Sheets shall be completed as required by WP 04-AD3001, Facility Mode Compliance.
- The following LCO applies during waste handling and waste storage mode when charging:
 - The Battery Exhaust System shall be operable when the Battery Exhaust System exhaust fans are IN SERVICE. **[LCO 3.2.5]**
- Prior to charging batteries in the TRUPACT Maintenance Facility, verify HVAC system is operable.
- Section 5.2, Battery Charging, can be performed independently from Section 5.1, Preoperational Checks.

4.0 PREREQUISITE ACTIONS

- 4.1 Waste Handling (WH), **IF** Emergency Stop Control is engaged, **THEN CONTACT** Waste Handling Engineer (WHE).
- 4.2 **IF** forklift battery is charged and still on battery charger, **THEN PERFORM** the following to disconnect forklift from charger:
 - 4.2.1 **ENSURE** LED screen displays Charge Complete.
 - 4.2.2 **ENSURE** battery charger is OFF.
 - 4.2.3 **DISCONNECT** battery charger power cable from battery power plugs.
 - 4.2.4 **CONNECT** battery power plugs to forklift power plugs.
 - 4.2.5 **RECORD** name of person removing forklift from charger, date, and time it was removed in Equipment Logbook.
- 4.3 **REVIEW** Equipment Logbook for outstanding deficiencies and Action Requests (ARs).

5.0 PERFORMANCE

5.1 PREOPERATIONAL CHECKS

- 5.1.1 **IF** any inspection fails, or is unsatisfactory,
THEN NOTIFY Site Environmental Compliance (SEC)
immediately for instructions on how to proceed.
- 5.1.2 **IF** a required HWFP inspection becomes delinquent, or has
failed,
THEN PERFORM the following:
- [A] Immediately **NOTIFY** on-call Site Environmental
Compliance (SEC) Representative and the Central
Monitoring Room Operator (CMRO) of delinquent or failed
inspection.
 - [B] **SCHEDULE** and **COMPLETE** the required inspection.
 - [C] **DOCUMENT** the following and **SUBMIT** to SEC Manager
within five working days:
 - Schedule for inspection.
 - Reason(s) why inspection was not performed or failed.
 - Any compensatory measures taken to offset negative
impacts resulting from not performing the inspection.
 - Actions to prevent further delinquencies.
 - [D] WHE, **GO TO** WP 15-GM1002, Issues Management
Processing of WIPP Forms, and **ENSURE** a WIPP form is
generated.

HWFP

- 5.1.3 **(\$)** WH, **COMPLETE** Attachment 1, 13-Ton Electrical Forklifts
Preoperational Checks. **[HWFP Table E-1]**

HWFP

5.1.4 **(\$)** **RECORD** the following in Equipment Logbook:
[HWFP Table E-1]

- Deficiencies noted.
- Corrective actions taken (e.g., outstanding or newly generated ARs and WIPP Form number)
- Hour/meter reading
- Equipment number
- Procedure number
- Sat or Problems Noted
- Date and time of preoperational check
- Signature

HWFP

5.1.5 **(\$)** **IF** any pre-operational checks are Unsatisfactory,
THEN DOCUMENT unsatisfactory condition in Equipment
 Logbook. **[HWFP Table E-1]**

[A] **IF** vehicle is leaking,
THEN:

[1] **GO TO** Attachment 2, Leak Categorization to
 categorize leak and **RETURN** to 5.1.5[A][2].

[2] **RECORD** leak category in Equipment Logbook and
 take action or contact Fire Protection Engineer in
 accordance with Leak Categorization in
 Attachment 2, Leak Categorization.

[B] **NOTIFY** WHE or Waste Handling Manager (WHM) of any
 deficiencies, and **OBTAIN** approval prior to use.

5.1.6 **WHEN** preparing for waste handling mode,
THEN COMPLETE needed portion of WP 05-WH1101
 Attachment 4, TP-II Preoperational Waste Handling Mode
 Checklist.

5.2 BATTERY CHARGING

NOTE

Except in emergency situations, the charger must be allowed to complete a charge cycle.

CAUTION

If battery charge indicator is at full capacity, additional charging may cause damage to the battery or charger.

TSR

- 5.2.1 **IF** forklift battery charge indicator is in red band,
THEN CHARGE battery before use.
- 5.2.2 **(\$)** WH, **IF** forklift is going to be placed on charge in CH Bay,
THEN CONTACT Central Monitoring Room to ensure WHB
Battery Exhaust System is operable. **[LCO 3.2.5]**
- 5.2.3 **DISCONNECT** battery power plugs from forklift.
- 5.2.4 **CONNECT** battery power plugs to connectors on battery charger
cable.
- 5.2.5 **ENSURE** battery charger is in ON position.

NOTE

The charging system performs an equalizing charge automatically as needed. No additional operator action is required.

- 5.2.6 **VERIFY** LED screen displays “battery connected.”
- 5.2.7 **RECORD** in Equipment Logbook:
- Name of person placing forklift on charge.
 - Date and time charge was initiated.
 - Type of charge performed (normal or equalizing).

**HWFP (\$ Attachment 1 – 13-Ton Electric Forklifts Preoperational Checks
[HWFP Table E-1]**

COMPLETED BY:

Print Name		Signature		Initials		Date		Time	

Deficiencies that are corrected when discovered may be considered a satisfactory check. Deficiencies that cannot be corrected require permission from the WHE prior to operating the 13-ton electric forklift.

Grounding strap is underneath the forklift.

This inspection may be performed in any order.

	INSPECTION	CRITERIA	SAT	N/A	UNSAT
1.	General Condition Checks	NO damage.			
		NO loose parts.			
		NO excessive oil leaks on forklift or floor.			
		NO trash.			
		Grounding strap attached.			
		Tires are in good condition; not excessively worn or cracked.			
		All accessible wheel lugs installed.			
		Deterioration: visible cracks, erosion, salt build-up, damage, corrosion, loose or missing parts, malfunctions, and structural deterioration.			
2.	Battery Compartment	Free of acid spills/leaks.			
		NO loose or missing caps or cables.			
3.	Fire Extinguisher	In place (mounting intact) and seal intact. Fire extinguisher inspection up to date and charged.			
4.	Brakes	Brake pedal is not springy or spongy and does not stick or bind when pressed.			
		Brake pedal has approximately 2 to 3 in. of free play – readily felt by hand.			
		Parking brake does not bind when set or released.			
5.	Forks, Upright and Lift Chains	Forks are correctly installed and locked in proper position.			
		NO obvious wear, damage, or missing parts.			
		NO slack or broken chains.			
		NO obvious cracks, breaks, bends, twists, or abnormal wear.			

CONTINUOUS USE

HWFP (\$) Attachment 1 – 13-Ton Electric Forklifts Preoperational Checks [HWFP Table E-1]

The hydraulic system reservoir level is checked when the carriage is lowered and the forks are level on the ground, and the key is OFF. If hydraulic oil above the “FULL” level, the hydraulic oil will leak from the breather during operation. Hydraulic level needs to be above the “ADD” mark. Contact the WHE if hydraulic oil is below the “ADD” mark.

	INSPECTION	CRITERIA	SAT	N/A	UNSAT
6.	Hydraulic System	Check reservoir level is above ADD mark.			
		NO leaks from hoses, couplings, or fittings.			
7.	Forklift Start/Operating Checks	Sit in seat, check seat belt is in good condition and fasten seat belt.			
		Adjust seat to provide easy access to all controls.			
		Ensure seat locking mechanism locks.			
		Adjust steering wheel tilt for easy access to all controls.			
		Directional control lever is in NEUTRAL .			
		Hoist control lever is in NEUTRAL .			
		Tilt control lever is in NEUTRAL .			
		Fork position lever is in NEUTRAL .			
		Side shift lever is in NEUTRAL .			
		Press service brake pedal.			
		Turn key ON to start forklift.			
		Immediately investigate any unusual noises.			
		Battery charge indicator shows adequate charger for operation.			
		Horn sounds.			
		Front lights illuminate.			
		Hoist control raises and lowers forks.			
		Tilt control tilts forks forward and backward.			
		Side shift control operates forks left and right.			
		Fork position control operates forks in and out.			
		Raise forks 6 to 10 in. above floor.			

HWFP (\$) Attachment 1 – 13-Ton Electric Forklifts Preoperational Checks
[HWFP Table E-1]

	INSPECTION	CRITERIA	SAT	N/A	UNSAT
8.	Brakes and Operating Checks	Engage service brake pedal.			
		Release parking brake.			
		Using directional control lever, select a direction to travel.			
		Press accelerator pedal and move forklift.			
		Forklift steering operates smoothly and does NOT pull to right or left.			
		Brakes are in good condition and DO NOT drag.			
		Backup alarm is operational while moving in reverse and back lights illuminate			
		Check that seat brake engages when operator rises from seat.			
		Brake lights illuminate, when pedal is pushed.			
		Stop forklift. Shift directional control level to neutral.			
		Set parking brake, lower fork, turn key to OFF position.			

Attachment 2 – Leak Categorization

	TYPE 0	TYPE 1	TYPE 2	TYPE 3	TYPE 4
Indications:	No indications of moisture - dry	Dampness around hoses or engine compartments, including oil sheen.	Dripping from a hose	Spraying from a hose or oil running down firewall, etc.	Ruptured hose (e.g., oil line, fuel line)
Status	Operational		DO NOT OPERATE		
Required Actions:	None	RECORD leak Type 1 and the source of the leak in Equipment Logbook.	[A] TAG equipment out of service with an Equipment Out of Service Tag in accordance with WP 04-AD3016, Equipment Out of Service Process. [B] SUBMIT AR for repairs. [C] RECORD leak type and AR number in Equipment Logbook. [D] WHEN repairs and cleanup are completed, the equipment can be put back into service.		